U.S. Patent Application
Serial No.: Not Assigned
Dkt. No.: 27943-00411USC1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§	
	§	Group Art Unit: Not
Hallenstål et al.	§	Assigned
	§	
Serial No.: Not Assigned	§	Examiner: Not Assigned
	§	
Filed: May 25, 2001 (herewith)	§	

For: **COMBINING NARROWBAND APPLICATIONS WITH BROADBAND TRANSPORT** (as amended hereby)

Box PATENT APPLICATION
Commissioner for Patents
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Dear Commissioner for Patents:

PRELIMINARY AMENDMENT PURSUANT TO 37 C.F.R. §1.115

Prior to a first Office Action on the above-referenced Application for Patent, please amend the Application as follows:

IN THE ABSTRACT

Please replace the current Abstract with the enclosed substitute Abstract on a separate sheet numbered Page 27.

The Abstract has been amended as indicated below:

ATM is used as a transport and switching mechanism in a hybrid STM/ATM network [(20),] while the signaling remains normal narrowband signaling. The narrowband signaling is transported on permanent paths over ATM connections, and the narrowband speech channels are transported on ATM and switched on a "Per call basis" (on-demand) through an ATM switch. [The hybrid STM/ATM network has an access node [(22)] which services narrowband terminals and which generates a signaling message in connection with call setup.] A translator [(50)] formats [the first] a call-setup-related signaling message into ATM cells so that the [first] signaling message can be routed through an ATM switch [(40)]

to a circuit switched (STM) node [(30)]. The circuit switched node (PSTN/ISDN) sets up a physical connection for the call and generates a further signaling message [for the call, the further signaling message pertaining] therefor that relates to the physical connection. The ATM switch routes an ATM cell-formatted version of the further signaling message to another ATM switch over an ATM physical interface [(41)]. Thus, the ATM switch switches both [narrow band] narrowband traffic and signaling for the call over the ATM physical interface.

IN THE TITLE

Please replace the current title ("NARROWBAND APPLICATIONS USING ATM SWITCHING AND TRANSPORT") with the following new title:

--COMBINING NARROWBAND APPLICATIONS WITH BROADBAND TRANSPORT--.

IN THE WRITTEN DESCRIPTION

Please insert the following paragraph at Page 1 between the original title ("NARROWBAND APPLICATIONS USING ATM SWITCHING AND TRANSPORT") and the background (e.g., prior to the word "BACKGROUND"):

--This Nonprovisional Application for Patent is a Continuation of U.S. Nonprovisional Application for Patent Serial No. 09/353,135, filed on July 14, 1999.--.

IN THE CLAIMS

Please cancel Claims 1-28, without prejudice to the subject matter thereof.

Please add the following new claims:

29. (New) An arrangement for combining narrowband and broadband transport mechanisms in a communications network, comprising:

a first node, said first node configured to provide call control functions and connection control functions; and

a second node, said second node connected to said first node by at least one link, said second node configured to provide connection control functions, said second node adapted to rely on said first node for call control functions.

30. (New) The arrangement according to claim 29, wherein said first node is directly connected to said second node by the at least one link.

31. (New) The arrangement according to claim 29, wherein said second node does not provide call control functions.

32. (New) The arrangement according to claim 29, wherein said first node includes a synchronous transfer mode (STM) switch, and said second node include an asynchronous transfer mode (ATM) switch.

33. (New) The arrangement according to claim 29, wherein said first node and said second node function together as a single logical node within the communications network.

34. (New) The arrangement according to claim 33, wherein the single logical node comprises a hybrid switch.

35. (New) The arrangement according to claim 29, wherein said first node is further connected to a time division multiplexed (TDM) network.

36. (New) The arrangement according to claim 29, wherein said second node is further connected to a time division multiplexed (TDM) network and an asynchronous transfer mode (ATM) network.

37. (New) The arrangement according to claim 29, wherein call control functions comprise switching intelligence of a telecommunications node, and connection control functions comprise switching fabric of a telecommunications node.

38. (New) A method for combining narrowband and broadband transport mechanisms in a communications network, comprising the steps of:

providing a first node having call control functionality and connection control functionality;

providing a second node having connection control functionality;

connecting the first node to the second node; and

sharing, by the first node, the call control functionality with the second node.

39. (New) The method according to claim 38, further comprising the step of:

transmitting, by the second node, incoming signaling information related to an incoming call to the first node.

40. (New) The method according to claim 39, further comprising the steps of:

receiving, by the first node, the incoming signaling information related to the incoming call from the second node;

executing, by the first node, call control functionality with respect to the incoming signaling information related to the incoming call to produce outgoing signaling information;

sending, by the first node, the outgoing signaling information to the second node.

41. (New) The method according to claim 40, further comprising the steps of:

receiving, by the second node, the outgoing signaling information from the first node;

switching, by the second node, the incoming call responsive to the outgoing signaling information to thereby forward an outgoing call from the second node.

42. (New) A telecommunications system comprising:

a first node, said first node configured to provide call control functions;

a second node, said second node configured to provide connection control functions and capable of receiving telecommunications data, said second node adapted to rely on said first node for call control functions;

a first link for connecting said first node with said second node, said first link for transporting signaling information associated with the received telecommunications data between said second node and said first node; and

a second link for connecting said first node with said second node, said second link for transporting the received telecommunications data between said first node and said second node.

43. (New) The telecommunications system according to claim 42, further comprising a third link, said third link for connecting said first node with said second node, said third link for transporting call control information from said first node to said second node for controlling the received telecommunications data; and wherein said first link is for transporting the signaling information associated with the received telecommunications data from said second node to said first node.

44. (New) The telecommunications system according to claim 42, wherein said first node is further connected to an intelligent network (IN) node, and said second node is further connected to a time division multiplexed (TDM) network and an asynchronous transfer mode (ATM) network.

45. (New) A method for combining narrowband and broadband transport mechanisms in a communications network, comprising the steps of:

receiving, at a first node, a communication, the communication including data information and signaling information;

sending, by the first node, the signaling information to a second node;

processing, by the second node, the signaling information to produce at least one routing instruction;

sending, by the second node, the at least one routing instruction to the first node; and

sending, by the first node, the data information to the second node responsive to the at least one routing instruction.

46. (New) The method according to claim 45, further comprising the step of:

forwarding, by the second node, the communication to another node.

47. (New) The method according to claim 46, wherein the first node includes a broadband switch, and the second node includes a narrowband switch; and wherein said step of forwarding, by the second node, the communication to another node comprises the step of forwarding, by the second node, the communication to the another node using a narrowband transport mechanism; and wherein said step of receiving, at a first node, a communication comprises the step of receiving, at the first node, the communication on a broadband transport mechanism.

48. (New) The method according to claim 45, wherein said step of sending, by the first node, the signaling information to a second node comprises the step of sending, by the first node, the signaling information to the second node over a first link, and wherein said step of sending, by the first node, the data information to the second node responsive to the at least one routing instruction comprises the step of sending, by the first node, the data information to the second node over a second link.

49. (New) The method according to claim 45, wherein the first node includes a broadband switching fabric, and the second node includes a narrowband switching fabric and a switching intelligence.

50. (New) The method according to claim 49, wherein the first node relies on the switching intelligence of the second node by responding to routing instructions.

51. (New) An arrangement for combining narrowband and broadband transport mechanisms in a communications network, comprising:

a narrowband component, said narrowband component including switching intelligence and narrowband switching fabric, said narrowband component adapted to terminate incoming sides and outgoing sides of communications;

a broadband component, said broadband component including broadband switching fabric, said broadband component adapted to terminate at least outgoing sides of communications; and

wherein the arrangement is capable of terminating an incoming side and an outgoing side of a first communication at said narrowband component, and the arrangement is capable of terminating an incoming side of a second communication at said narrowband component and an outgoing side of the second communication at said broadband component.

52. (New) The arrangement according to claim 51, wherein said broadband component is further adapted to terminate incoming sides of communications, and the arrangement is further capable of terminating an incoming side and an outgoing side of a third communication at said broadband component.

53. (New) The arrangement according to claim 52, wherein the third communication is serviced by at least one telecommunications feature via said narrowband component.

54. (New) The arrangement according to claim 51, wherein said broadband component relies on the switching intelligence of said narrowband component.

55. (New) The arrangement according to claim 51, wherein said narrowband component includes a synchronous transfer mode (STM) switch, and said broadband component includes an asynchronous transfer mode (ATM) switch.

56. (New) The arrangement according to claim 51, further comprising at least one circuit emulator, said at least one circuit emulator adapted to enable said broadband component to emulate a circuit with respect to said narrowband component.

57. (New) The arrangement according to claim 51, wherein said broadband component is adapted to emulate a circuit connection for the outgoing side of the second communication at said broadband component.

58. (New) A method for combining narrowband applications with broadband transport in a communications network, comprising:

terminating a time division multiplexed (TDM) inbound side of a first communication at a circuit switch;

switching the first communication by the circuit switch;

terminating a TDM outbound side of the first communication at the circuit switch;

terminating a TDM inbound side of a second communication at the circuit switch;

switching the second communication by the circuit switch;

switching the second communication by a packet switch; and

terminating an asynchronous transfer mode (ATM) outbound side of the second communication at the packet switch.

59. (New) The method according to claim 58, further comprising the steps of:

terminating an ATM inbound side of a third communication at the packet switch;

switching the third communication by the packet switch;

switching the third communication by the circuit switch; and

terminating a TDM outbound side of the third communication at the circuit switch.

60. (New) The method according to claim 58, further comprising the steps of:

terminating an ATM inbound side of a third communication at the packet switch;

switching the third communication by the packet switch;

switching the third communication by the circuit switch;

providing a telecommunications service for the third communication via the circuit switch; and

at least one of the following steps:

terminating an ATM outbound side of the third communication at the packet switch; and

terminating a TDM outbound side of the third communication at the circuit switch.

61. (New) The method according to claim 58, further comprising the steps of:

terminating an ATM inbound side of a third communication at the packet switch;

switching the third communication by the packet switch; and

terminating an ATM outbound side of the third communication at the packet switch.

62. (New) A system for combining narrowband and broadband transport mechanisms in a communications network, comprising:

a first node, said first node including switching intelligence;

a plurality of second nodes, each second node of said plurality of second nodes including broadband switching fabric;

an interworking entity, said interworking entity operatively connectable to said first node and said plurality of second nodes, said interworking entity adapted to receive data in a first format from said first node, map the received data into a second format interpretable by said plurality of second nodes, and send the mapped data to at least one second node of said plurality of second nodes; and

wherein said interworking entity thereby enables said plurality of second nodes to be controlled, at least partially, by the switching intelligence of said first node.

63. (New) The system according to claim 62, wherein said first node is comprised of a telecommunications node, said telecommunications node including narrowband switching fabric.

64. (New) The system according to claim 62, wherein said interworking entity comprises a third node between said first node and said plurality of second nodes.

65. (New) The system according to claim 62, wherein said interworking entity is at least one of part of and co-located with a second node of said plurality of second nodes.

66. (New) The system according to claim 62, wherein said interworking entity is further adapted to emulate an interface for a synchronous transfer mode (STM)-based node with respect to said first node.

67. (New) The system according to claim 62, wherein said plurality of second nodes comprise at least part of a broadband network.

68. (New) The system according to claim 67, wherein each second node of said plurality of second nodes is adapted to communicate signaling information and data information over the broadband network and to convert broadband information into another media type.

69. (New) The system according to claim 67, wherein the mapped data comprises instructions for the at least one second node to establish a communication path through at least a portion of the broadband network.

70. (New) The system according to claim 62, wherein the received data comprises at least one first network address, and the mapped data comprises at least one second network address.

71. (New) The system according to claim 70, wherein the at least one first network address comprises at least one trunk connection.

72. (New) The system according to claim 70, wherein the at least one second network address comprises at least one asynchronous transfer mode (ATM) identifier.

REMARKS

A substitute Abstract has been provided in order to comport with the new 150-word limitation requirement of 37 C.F.R. §1.72(b).

It is noted for the record that these new claims, especially given the pre-examination status of the Application, are not presented for any reason or reasons related to patentability, including those related to statutory requirements for patentability and/or prior art. Instead, these new claims are intended to provide a superior competitive advantage and varying claim scope.

Applicants respectfully request consideration of this Application as amended and earnestly solicit an early Notice of Allowance for Claims 29-72.

Respectfully submitted,

JENKENS & GILCHRIST, P.C.

Keith W. Saunders

Keith W. Saunders
Reg. No. 41,462

Date: May 25, 2001

1445 Ross Avenue, Suite 3200
Dallas, Texas 75202
(214) 855-4732
(214) 855-4300 (fax)

SUBSTITUTE ABSTRACT OF THE DISCLOSURE

ATM is used as a transport and switching mechanism in a hybrid STM/ATM network while the signaling remains normal narrowband signaling. The narrowband signaling is transported on permanent paths over ATM connections, and the narrowband speech channels are transported on ATM and switched on a "Per call basis" (on-demand) through an ATM switch. A translator formats a call-setup-related signaling message into ATM cells so that the signaling message can be routed through an ATM switch to a circuit switched (STM) node. The circuit switched node (PSTN/ISDN) sets up a physical connection for the call and generates a further signaling message therefor that relates to the physical connection. The ATM switch routes an ATM cell-formatted version of the further signaling message to another ATM switch over an ATM physical interface. Thus, the ATM switch switches both narrowband traffic and signaling for the call over the ATM physical interface.